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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,227	07/15/2003	David L. Zenker	KCC 4975 (K-C 19,019)	8513
321 7590 02/22/2007 SENNIGER POWERS ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			EXAMINER MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/22/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/22/2007.

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uspatents@senniger.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,227	ZENKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew D. Matzek	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 3-6, 8, 10-13, 15, 16, 18-20, 22, 23 and 27-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 is/are allowed.
- 6) ☒ Claim(s) 3-6, 8, 10-13, 15, 16, 22, 23, 27-34 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/07, 2/07</u> | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/11/2006 has been entered.

***Response to Amendment***

2. The amendment dated 12/11/2006 has been fully considered and entered into the Record. Claim 31 has been amended and claim 38 is added herein. Amended claim 31 and new claim 38 contain no new matter. Claims 3-6, 8, 10-13, 15, 16, 18-20, 22, 23 and 27-38 are currently pending.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-6, 8, 10-13, 15, 16, 27-33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) in view of May et al. (US 2002/0009940).

a. Ouellette et al. teach an elastic laminate comprising at least a first fabric layer (absorbent core) and an open cell mesh having first and second strands. The first fibers are deformed such that they are substantially flat in shape and the second fibers are elliptical in shape (Abstract). The Examiner equates the open cell mesh to the woven

scrim of Applicant's invention. The applied invention is directed to an elastic absorbent article (col. 1, lines 15-20). The laminate is preferably elastic in at least a portion of the structural direction D, the direction of the second fibers **28**, mislabeled 29 in Figures 1 and 2, and inelastic in the direction of the first fibers (col. 2, lines 5-13 and col. 3, lines 45-50). The Examiner interprets the applied invention to have first fibers that are the MD fibers of Applicant and second fibers that are CD fibers of Applicant as length/machine direction is directed to the larger dimension and the width/cross direction is directed to the smaller dimension. Applicant is directed to Figures 1 and 2. The inelasticity in the MD and the elasticity in the CD yields an article with a lower stiffness of the absorbent core in the cross direction. Ouellette et al. teach having CD strands with a spacing frequency different from the first strand spacing in the MD (col. 12, lines 1-28), but do not teach having CD zones along the MD with varied strand density.

b. With regards to the new limitations set forth in amended claim 31 and new claim 38 the MD and CD strands define a plurality of openings in the scrim layer (col. 4, lines 25-35). The new limitation of having the scrim member being attached to the absorbent core through entanglement of fibers with each other where entangled fibers pass through said scrim member openings is provided by the reference's description of the bonding of the two layers (col. 5, lines 14-46). The applied reference teaches that the strands of the scrim integrally bonded to the first fabric layer, but along with bonding to the first fabric layer the scrim also penetrates at least 10% of the thickness of the first fabric layer and most preferably, about 100 percent of the of the first fabric thickness (col. 5, lines 35-40). This means that the scrim has penetrated the first fabric layer and fibers of the first fabric

layer would necessarily penetrate the openings of the scrim and entangle with the strands of the scrim layer at the points where the scrim is not bonded to the first fabric layer.

While entanglement is not the primary mode of attachment between the two layers there is entanglement between the scrim and the first fabric layer, meeting the instant limitation. Claim 38 is met as the references teaches that both the MD and CD fibers may penetrate the first layer (col. 5, lines 14-17 and col. 8, lines 39-42).

c. May et al. teach a targeted elastic laminate material having different zones of tension providing the article with improved fit characteristics for disposable personal care products (Abstract). Referring to Figure 10 a pant-like absorbent garment 2 with high-tension (high stiffness) zones 7 and 9 with low-tension (low stiffness) zones 1 and 3 [0096]. In Figure 10 the machine direction is the vertical direction and the cross direction is the horizontal direction. Therefore, the high stiffness zones 7 and 9 run in CD across the MD of the article separated by the low stiffness zones of 1 and 3.

d. Since Ouellette et al. and May et al. are from the same field of endeavor (i.e. personal absorbent articles), the purpose disclosed by May et al. would have been recognized in the pertinent art of Ouellette et al.

e. It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the absorbent article of Ouellette et al. with the differing stiffness zones of May et al. to create an article with improved fit characteristics to disposable personal care products (Abstract; May et al.). As taught by Ouellette et al. this may be done by varying strand density, strand cross-sectional area, and the modulus of the strands (col. 12, lines 13-18). The article of the combined teachings of Ouellette et al.

and May et al. possesses strand spacing that is different in the CD than the MD and has CD strand spacing that is varied in different zones of the MD.

f. Claims 3-6 are rejected as MD fibers have a strand frequency of between 2 and 10 per centimeter and the CD fibers have a strand frequency of between 2 and 5 (col. 12, lines 1-28; Ouellette et al.). This yields a CD to MD strand frequency ratio ranging from 1.0 CD to 1.0 MD to 0.2 CD to 1.0 MD. Claim 8 is rejected as the CD has a different strand spacing frequency than the MD.

g. Claim 15 is rejected as the CD fibers are substantially elliptical with major and minor axes being arranged substantially normal to a plane of the MD strands (Abstract; Ouellette et al.). The MD fibers are left with a flattened elliptical shape in the final product (Figures 1 and 2; Ouellette et al.). Claim 16 is rejected as the article of Ouellette et al. may have a CD strand density of 5 per centimeter with a cross-sectional area of  $0.003\text{cm}^2$  and a MD strand density of 2 strands per centimeter with a cross-sectional area of  $0.03\text{cm}^2$  (col. 12, lines 1-15). Therefore if the strands have the same facial shape this allows for CD strands with a lesser minor axis (diameter for circular strands) than the MD strands ( $0.0006\text{ cm}^2$  or a diameter of 0.028 cm per CD strand and  $0.0015\text{ cm}^2$  or diameter of 0.044 cm per MD strand). This provides for a CD/MD diameter ratio of 0.63. The CD/MD diameter ratio is a result effective variable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the article of Ouellette et al. with a strand diameter ratio of less than about 0.5, since it has been held discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

- h. Claims 27-30 are rejected as the structural limitations set forth in claim 31 have been met and as such can serve as an absorbent article in the instantly claimed garments.
- 4. Claims 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 1 above, and further in view of Ducker et al. (US 5,622,581). The invention of Ouellette et al. is silent as to the weakening of the CD strands along their lengths to enhance buckling.
  - a. Ducker et al. disclose a disposable garment with de-elasticized elastic members via macerators, chemicals, selective laser beams, heat and freezing (Abstract). In the applied invention the elastic strands can be deactivated at points on the web (1) where it is desired to reduce or to eliminate the elastic tension in the finished product (col. 3, lines 28-34 and Figure 1). The means applied to the elastic members are meant to cut or weaken the elastic (col. 4, lines 4-13). Weakened elastic members remain continuous following treatment.
  - b. Since Ouellette et al. and Ducker et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Ducker et al. would have been recognized in the pertinent art of Ouellette et al.
  - c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have de-elasticized at least some of the CD strands of the invention of Ouellette et al. The skilled artisan would have been motivated by the desire to create an article with varying elasticity within the absorptive article in order to prevent undesired discomfort or looseness in the absorptive areas, while remaining elastic in other areas.

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5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 22 above, and further in of Schafer et al. (US PG Pub 2004/0092898). Ouellette et al. and Ducker et al. are silent as to the use of calcium carbonate as the chemical means by which the CD strands are de-elasticized.

a. Schafer et al. disclose a breathable absorbent thong shaped sanitary napkin or panty liner (Abstract). The applied publication teaches the incorporation of particles of calcium carbonate into a polymeric backsheet for said absorbent napkin and due to the incompatibility of the calcium carbonate and polymer cracks are formed through the layer of polymer to form micropores, which allow water vapor to permeate through the film (para 67).

b. Since Ouellette et al. and Schafer et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Schafer et al. would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have incorporated calcium carbonate into the strands of Ducker et al. that make up the reinforcing scrim. The skilled artisan would have been motivated by the desire to deactivate the elastic strands at points on the web via chemical means.

6. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) in view of Dean (US 4,107,371). Ouellette et al. is silent as to the weaving of the MD and CD strands in a manner that allows for the CD to woven under and over the MD strands.



a. Dean teaches the use of an open weave that is relatively stiff in one direction and relatively flexible in other direction (Abstract). Adjacent parallel strands arranged with one strand over and the next strand under in alternating interlocking relationship at the point of crossing each of respective monofilaments in the filling direction. The strands are then stabilized by fusion of the thermoplastic polymer at the point of the strands' intersection (Abstract). While Dean teaches flexibility in the warp direction (MD) and stiffness in the filling direction (CD) the emphasis of Dean's disclosure is provide relative flexibility in one direction and relative stiffness in the other. Therefore, an article may be constructed with flexibility in the filling direction (CD) and stiffness in the warp direction (MD).

b. Since it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24.

c. The combined articles of Ouellette et al. and Dean would result in an article that has possesses a scrim member with MD and CD strands crossing over one another with a stiffness in the CD that is less than the MD. The CD strands are corrugated and forms peaks and valleys along the CD with the MD stands being arranged to engage the CD stands across the peaks and valleys thereof. This fiber orientation provided by Dean allows for flexibility in the CD and stiffness in the MD.

***Allowable Subject Matter***

7. Claim 35 is deemed allowable at this point in prosecution. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach the unique combination within an absorbent article that has a scrim member comprising MD and CD strands with the CD strands having lower stiffness than the MD strands, some of the CD strands being continuous and having weakened points along their lengths to enhance buckling at points between the MD stands that are offset from the adjacent CD strands.

8. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of Record fails to disclose or suggest an absorbent article with a network of MD strands and CD strands with CD strands that cause the article to have less stiffness in the CD than the MD and wherein at least some of the CD strands are continuous and have weakened points along their lengths to enhance buckling by means of said strands being notched, abraded or compressed.

***Response to Arguments***

9. Applicant argues that Ouellette et al. and May et al. fail to teach an absorbent article including a scrim member being attached to an absorbent core through entanglement of fibers with each other where entangled fibers pass through the scrim member openings. As explained in the rejection set forth above, Examiner takes the position that while entanglement is not the primary mode of attachment between the two layers there is entanglement between the scrim and the first fabric layer, meeting the instant limitation.

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10. Applicant argues that in Figures 1 and 2 of Ouellette et al. none of the fibers of the first fabric layer extend through the openings of the scrim mesh. Based upon the figures alone, Applicant is correct. However when considering the reference in its entirety, it provides for the instant limitations. May et al., Ducker et al. and Dean et al. have not been relied upon to teach the entanglement of fibers of the absorbent layer and the scrim layer.

11. Applicant argues that Oullette et al. in view of May et al. fail to teach an absorbent article including a scrim attached to an absorbent core through at least one of: entanglement of fibers with the scrim member; entanglement of fibers with other fibers entangled with the scrim member; and entanglement of fibers with each other where at least one of the entangled fibers passes through the scrim member. As previously explained by Examiner the fabric layer of the absorbent core (first fabric layer) is preferably penetrated to considerable depth (up to 100%) by the scrim layer and therefore the fibers of the absorbent core would necessarily entangle with the scrim layer.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mdm

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Art Unit 1771